

ABSTRACT OF THE DISCLOSURE

Open LED chips may be arranged directly on the surface of a replaceable lamp capsule without intervening packages that reduce overall light emission. The chips may be oriented in such a way that the lamp generates a unique "donut" shape radiation pattern, which is suitable for a flat and shallow secondary optics to collimate the light into a desired beam pattern, and to reduce the unaesthetic appearance of points of light in an onlooker's view. The LED chips are driven in such a way that one chip fails, the whole lamp fails to avoid a partially lit appearance. At the same time the heat generated by the LED chips may be conducted away by the support structure to possibly vehicle's sheet metal to enhance life of the LED chip. The standardization of this LED lamp makes this product more cost effective thus to be used in broader lighting applications.